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OM protein - protein search, using SW model

Run on: June 18, 2003, 03:16:37 ; Search time 37.4454 Seconds

(without alignments)
1215.770 Million cell updates/sec

Title: US-09-807-933B-1

Perfect score: 1836
Sequence: 1 MKFTIASALLALALGTEM.....TYKEVTCPEKITAKTGSRK 338

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-Processing: Minimum Match 0%

Maximum Match 100%

Database :

A.Geneseq_101002.*
1: /SID22/gcgdata/geneseq/geneseq-emb1/AA1980.DAT.*
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3: /SID22/gcgdata/geneseq/geneseq-emb1/AA1982.DAT.*
4: /SID22/gcgdata/geneseq/geneseq-emb1/AA1983.DAT.*
5: /SID22/gcgdata/geneseq/geneseq-emb1/AA1984.DAT.*
6: /SID22/gcgdata/geneseq/geneseq-emb1/AA1985.DAT.*
7: /SID22/gcgdata/geneseq/geneseq-emb1/AA1986.DAT.*
8: /SID22/gcgdata/geneseq/geneseq-emb1/AA1987.DAT.*
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22: /SID22/gcgdata/geneseq/geneseq-emb1/AA2001.DAT.*
23: /SID22/gcgdata/geneseq/geneseq-emb1/AA2002.DAT.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1836	100.0	338	21	Endoglucanase prot
2	1836	100.0	338	23	AAO15055
3	1836	100.0	338	23	AAO15056
4	1612	87.8	366	21	AAO15057
5	1612	87.8	366	23	AAO15058
6	1612	87.8	366	23	AAO15059
7	1404	76.5	360	21	AAO15060
8	1404	76.5	360	23	AAO15061
9	1404	76.5	360	23	AAO15062
10	1263.5	68.8	245	23	AAO15063

11	1247	67.9	338	21	AAO15064
12	1247	67.9	338	23	AAO15065
13	1247	67.9	338	23	AAO15066
14	1222.5	66.6	387	21	AAO15067
15	1222.5	66.6	387	23	AAO15068
16	1222.5	66.6	387	23	AAO15069
17	1159	63.1	228	23	AAO15070
18	1106	60.2	346	21	AAO15071
19	1106	60.2	346	23	AAO15072
20	1106	60.2	346	23	AAO15073
21	761.5	41.5	306	19	AAO15074
22	759.5	41.4	225	21	AAO15075
23	759.5	41.4	225	22	AAO15076
24	756.5	41.2	299	17	AAO15077
25	756.5	41.2	299	19	AAO15078
26	755.5	41.1	225	17	AAO15079
27	755.5	41.1	297	17	AAO15080
28	755.5	41.1	308	17	AAO15081
29	751.5	40.9	200	19	AAO15082
30	750.5	40.9	204	19	AAO15083
31	743.5	40.5	200	19	AAO15084
32	738	40.2	223	23	AAO15085
33	738	40.2	223	23	AAO15086
34	735.5	40.1	200	19	AAO15087
35	722	39.3	349	17	AAO15088
36	718	39.1	310	17	AAO15089
37	716.5	39.0	202	19	AAO15090
38	716.5	39.0	222	17	AAO15091
39	716.5	39.0	294	17	AAO15092
40	711.5	38.8	306	19	AAO15093
41	709.5	38.6	304	19	AAO15094
42	703	38.3	201	19	AAO15095
43	701	38.2	307	19	AAO15096
44	695.5	37.9	235	18	AAO15097
45	694	37.8	376	12	AAO15098

ALIGNMENTS

RESULT 1	AAO1509821	standard; Protein; 338 AA.
ID	AAO1509821	
AC	AAO1509821	
XX		
DT	25-SEP-2000	(first entry)
XX		
DE	Endoglucanase protein sequence 1.	
XX		
KW	Endoglucanase; cellulose breakdown; produce pulp; papermaking;	
KW	animal foodstuff.	
XX		
OS	Rhizopus oryzae.	
XX		
PN	WO200024879-A1.	
XX		
PD	04-MAY-2000.	
XX		
PF	25-OCT-1999;	99WO-JP05884.
XX		
PR	23-OCT-1998;	98UP-0302387.
XX		
PA	(MEIJU) MEIJU SEIKA KAISHA LTD.	
XX		
PI	Nakamura Y, Moriya T, Baba Y, Yanai K, Sumida N, Nishimura T;	
XX	Murashima K, Nakane A, Yaguchi T, Koga J, Murakami T, Kono T;	
XX		
DR	WPI: 2000-365117/31.	
XX		
DR	N-PSDB; AAO1509821.	
XX		
PT	Endoglucanases of fungal origin with high activity under alkaline	
XX	conditions for production of paper pulp and animal feedstuffs	

XX PS Claim 44; Page 106-108; 180pp; Japanese.
 XX CC This sequence represents an endoglucanase protein. The invention relates
 CC to an endoglucanase of fungal origin which can completely break down
 CC purified cellulose at a concentration of less than 1mg protein/litre,
 CC and produces more than 50% breakdown of cellulose at pH 8.5. The
 CC invention includes endoglucanase protein sequences (see
 CC AAB09825-B09830), endoglucanase nucleotide sequences (see
 CC AAA62726-A62732), and primers (AAA62733-A62802) which are used in the
 CC identification of the endoglucanase sequences, and in the construction of
 CC vectors containing the polynucleotides. The endoglucanase enzymes are
 CC used for the production of pulp for papermaking and for the production of
 CC animal foodstuffs.
 XX CC
 SQ Sequence 338 AA;
 Query Match 100.0%; Score 1836; DB 21; Length 338;
 Best Local Similarity 100.0%; Pred. No. 2.1e-125;
 Matches 338; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MKRTTASSALLALALGTEMASAECISKLYGCGGKMMNGPTCCESGTCVSNDDYSSOC 60
 DB 1 MKRTTASSALLALALGTEMASAECISKLYGCGGKMMNGPTCCESGTCVSNDDYSSOC 60
 QY 61 LPBSSSGNKSSESANHKTTTAAHKTTTAAHKTTTAAHKTTTAAKSTPNSSSSSSG 120
 DB 61 LPBSSSGNKSSESANHKTTTAAHKTTTAAHKTTTAAHKTTTAAKSTPNSSSSSSG 120
 QY 121 KYSAVSGAGSGNGVTRRYNDCCRAKSCSWPGKANVSSPVKSCNKDGTALSDNAQSGCNG 180
 DB 121 KYSAVSGAGSGNGVTRRYNDCCRAKSCSWPGKANVSSPVKSCNKDGTALSDNAQSGCNG 180
 QY 181 GNSYMCNDNQPMVAVNDNLAYGFAPAAAIISGGGSRWCCSCFELTFTSTVAGKKMVOVTN 240
 DB 181 GNSYMCNDNQPMVAVNDNLAYGFAPAAAIISGGGSRWCCSCFELTFTSTVAGKKMVOVTN 240
 QY 241 TGGDLSSSTGAHFDLQMPGGGVGIFNGCSSQMGAPNDGWSRYGGIISASDSSLPSALO 300
 DB 241 TGGDLSSSTGAHFDLQMPGGGVGIFNGCSSQMGAPNDGWSRYGGIISASDSSLPSALO 300
 QY 301 AGCKMRFNMFKNADNPSMTYKEVTCPEKITTAKTGCGRK 338
 DB 301 AGCKMRFNMFKNADNPSMTYKEVTCPEKITTAKTGCGRK 338
 RESULT 2
 ID AAO15052 standard; Protein; 338 AA.
 XX AC AAO15052;
 XX DT 22-AUG-2002 (first entry)
 XX DE Rhizopus arrhizus endoglucanase-related protein 1.
 XX KM Zygomycetes-originated endoglucanase; cellulose binding domain;
 XX KW fibre processing; waste paper de-inking; paper pulp.
 XX OS Rhizopus arrhizus.
 XX PN WO200242474-A1.
 XX PD 30-MAY-2002.
 XX PR 21-NOV-2001; 2001WO-JP10188.
 XX PR 21-NOV-2000; 2000JP-0354296.
 XX PA (MEIJU) MEIJI SEIKA KAISHA LTD.
 XX PI Nakane A, Baba Y, Koga J, Kubota H;
 XX

DR MPI; 2002-471729/50.
 DR N-PSDB; AAL43244, AAL43250.
 XX CC Cellulose-binding domain-lacking Zygomycetes-originated endoglucanase,
 PT with effect of endoglucanase activity enhanced in processing fibers,
 PT deinking waste paper and improving freeness of paper pulp -
 XX CC
 PS Claim 5; Page 54-55; 109pp; Japanese.
 XX CC
 CC The invention comprises the amino acid and coding sequences of
 CC zygomycetes-originated endoglucanase enzymes lacking the cellulose
 CC binding domain. The zygomycetes-originated endoglucanase enzymes of the
 CC invention have enhanced endoglucanase activity. The zygomycetes-
 CC originated endoglucanase enzymes of the invention are useful for
 CC processing fibres, de-inking waste paper and improving the freeness of
 CC paper pulp - which is particularly applicable in detergent compositions.
 CC The present amino acid sequence represents an endoglucanase-related
 CC protein of the invention.
 XX CC
 SQ Sequence 338 AA;
 Query Match 100.0%; Score 1836; DB 23; Length 338;
 Best Local Similarity 100.0%; Pred. No. 2.1e-125;
 Matches 338; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MKRTTASSALLALALGTEMASAECISKLYGCGGKMMNGPTCCESGTCVSNDDYSSOC 60
 DB 1 MKRTTASSALLALALGTEMASAECISKLYGCGGKMMNGPTCCESGTCVSNDDYSSOC 60
 QY 61 LPBSSSGNKSSESANHKTTTAAHKTTTAAHKTTTAAHKTTTAAKSTPNSSSSSSG 120
 DB 61 LPBSSSGNKSSESANHKTTTAAHKTTTAAHKTTTAAHKTTTAAKSTPNSSSSSSG 120
 QY 121 KYSAVSGAGSGNGVTRRYNDCCRAKSCSWPGKANVSSPVKSCNKDGTALSDNAQSGCNG 180
 DB 121 KYSAVSGAGSGNGVTRRYNDCCRAKSCSWPGKANVSSPVKSCNKDGTALSDNAQSGCNG 180
 QY 181 GNSYMCNDNQPMVAVNDNLAYGFAPAAAIISGGGSRWCCSCFELTFTSTVAGKKMVOVTN 240
 DB 181 GNSYMCNDNQPMVAVNDNLAYGFAPAAAIISGGGSRWCCSCFELTFTSTVAGKKMVOVTN 240
 QY 241 TGGDLSSSTGAHFDLQMPGGGVGIFNGCSSQMGAPNDGWSRYGGIISASDSSLPSALO 300
 DB 241 TGGDLSSSTGAHFDLQMPGGGVGIFNGCSSQMGAPNDGWSRYGGIISASDSSLPSALO 300
 QY 301 AGCKMRFNMFKNADNPSMTYKEVTCPEKITTAKTGCGRK 338
 DB 301 AGCKMRFNMFKNADNPSMTYKEVTCPEKITTAKTGCGRK 338
 RESULT 3
 ID ABB08060 standard; protein; 338 AA.
 XX AC ABB08060;
 XX DT 27-AUG-2002 (first entry)
 XX DE R. oryzae CP96001 RCE1 protein.
 XX KM Cellulase; endoglucanase; surfactant; detergent; cellulose; paper;
 XX KW pulp treatment; RCE1.
 XX OS Rhizopus oryzae.
 XX FH Key Location/Qualifiers
 FT Peptide 1..23
 FT Protein /note= "signal peptide"
 FT /note= "mature protein"
 XX PN WO200238754-A1.
 XX


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OY 61 LPSGSSGNKS-----ESAHKTTTA 81
DB 61 LAPESNGNSSECSKLYGCGGKDMNGPTCCESGTCVKVSNNDYQCLAPESNGNKTSES 120
OY 82 AHKTTTAHKTTTAPAKTTTVAKASTPSSSSSSSKRYAVSGASGNVTRRYMC 141
DB 121 AHKTT-----TTTAPAKEITTTAKAS-----NSSNSGKYSIVSGASGNVTRRYMDC 169
OY 142 CKAASWPBKANVSPVKSCKNDGYTALSDNSAOSGNGNSYMCNDNPMAVNDNLAYG 201
DB 170 CKAASWPBKANVSPVKSCKNDGYTALSDNSAOSGNGNSYMCNDNPMAVNDNLAYG 229
OY 202 FAALAISSGGSERWCCSCFELTFTSTSVAGKMWVQVNTGDLASSTGAHFDLQMPGG 261
DB 230 FAALAISSGGSERWCCSCFELTFTSTSVAGKMWVQVNTGDLASSTGAHFDLQMPGG 289
OY 262 VGIFFNGCSQKAPNDGWSRYGGISASDCSLPSALQAGCKRPMFKADNPSMTYK 321
DB 290 VGIFFNGCSQKAPNDGWSRYGGISASDCSLPSALQAGCKRPMFKADNPSMTYK 349
OY 322 EYTCPEKITAKTGCSRK 338
DB 350 EYTCPEKITAKTGCSRK 366

```

RESULT 7

AAB09823 standard; Protein; 360 AA.

AAB09823;

25-SEP-2000 (first entry)

Endoglucanase protein sequence 3.

Endoglucanase; cellulose breakdown; produce pulp; papermaking; animal foodstuff.

Rhizopus oryzae.

WO200024879-A1.

04-MAY-2000.

25-OCT-1999; 99WO-JP05884.

23-OCT-1998; 98JP-0302387.

(MEIJ) MEIJI SEIKA KAISHA LTD.

Nakamura Y, Moriya T, Baba Y, Yanai K, Sumida N, Nishimura T, Mureahima K, Nakane A, Yaguchi T, Koga J, Murakami T, Kono T;

WPI: 2000-365117/31.

DR N-PSDB; AAA62728.

Endoglucanases of fungal origin with high activity under alkaline conditions for production of paper pulp and animal feedstuffs -

Claim 44; Page 115-117; 180pp; Japanese.

This sequence represents an endoglucanase protein. The invention relates to an endoglucanase of fungal origin which can completely break down purified cellulose at a concentration of less than 1mg protein/litre, and produces more than 50% breakdown of cellulose at pH 8.5. The invention includes endoglucanase protein sequences (see AAB09823-B09830), endoglucanase nucleotide sequences (see AAA62726-A62732) and primers (AAA62731-A62802) which are used in the identification of the endoglucanase sequences, and in the construction of vectors containing the polynucleotides. The endoglucanase enzymes are used for the production of pulp for papermaking and for the production of animal foodstuffs.

Sequence 360 AA;

Query Match 76.5%; Score 1404; DB 21; Length 360;

Best Local Similarity 73.7%; Pred. No. 4, 9e-94; Matches 266; Conservative 32; Mismatches 39; Indels 24; Gaps 7;

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OY 1 MKFTIASSALIALALGTEMAAECSEKLYGCGGKDMNGPTCCESGTC--KVSNDYVS 58
DB 1 MKFTIASSALIALALGTEMAAECSEKLYGCGGKDMNGPTCCESGTCVDPNPPTS 60
OY 59 OCLPSG--SSGNKS-----ESAHKTTTAAHKTTTA-----AHKTTTAPAK 100
DB 61 QCVPMENLTSTVSKSHKTTTIESAKTTTTSKKTITTEASKTTTTEASKTTTTEAS 120
OY 101 K--TTTAAKST--PENSSSSSGKRYSAVSGASGNVTRRYMDCCKKASCWPKRANVSP 157
DB 121 KTTTAAKASTSTSSSSSSASTNYSAVSGASGNVTRRYMDCCKKASCWPKRANVSP 180
OY 158 VSKCKNDGYTALSDNSAOSGNGNSYMCNDNPMAVNDNLAYGFAALAISSGGSERWCC 217
DB 181 VSKCKNDGYT--LADNNTQNGCVGSSSYTCNDNPMAVNDNLAYGFAALAISSGGSERWCC 239
OY 218 SCFELTFTSTSVAGKMWVQVNTGDLASSTGAHFDLQMPGGVGIFFNGCSQKAPND 277
DB 240 ACFELTFTSTAVKGMVQVNTGSDLSNTGAHFDLQMPGGVGIFFNGCSQKAPND 299
OY 278 GWSRYGGISASDCSSLPSALQAGCKRPMFKADNPSMTYKEVTCPEKITAKTGCSR 337
DB 300 GWSRYGGVSSASDCSSLPSALQAGCKRPMFKADNPSMTYKOVTCPEKITAKTGCSR 359
OY 338 K 338
DB 360 K 360

```

RESULT 8

AA015054 standard; Protein; 360 AA.

AA015054;

22-AUG-2002 (first entry)

Rhizopus arthizus endoglucanase-related protein 3.

Zygomycetes-originated endoglucanase; cellulose binding domain; fibre processing; waste paper de-inking; paper pulp.

Rhizopus arthizus.

WO2000242474-A1.

30-MAY-2002.

21-NOV-2001; 2001WO-JP10188.

21-NOV-2000; 2000JP-0354296.

(MEIJ) MEIJI SEIKA KAISHA LTD.

Nakane A, Baba Y, Koga J, Kubota H;

WPI: 2002-471729/50.

DR N-PSDB; AAL43246.

Cellulose-binding domain-lacking Zygomycetes-originated endoglucanase, with effect of endoglucanase activity enhanced in processing fibers, deinking waste paper and improving freeness of paper pulp -

Claim 5; Page 63-65; 109pp; Japanese.

The invention comprises the amino acid and coding sequences of zygomycetes-originated endoglucanase enzymes lacking the cellulose

CC binding domain. The zygomycetes-originated endoglucanase enzymes of the
 CC invention have enhanced endoglucanase activity. The zygomycetes-
 CC originated endoglucanase enzymes of the invention are useful for
 CC processing fibres, de-inking waste paper and improving the freeness of
 CC paper pulp - which is particularly applicable in detergent compositions.
 CC The present amino acid sequence represents an endoglucanase-related
 CC protein of the invention.

CC Sequence 360 AA;

Query Match 76.5%; Score 1404; DB 23; Length 360;

Best Local Similarity 73.7%; Pred. No. 4.9e-94;

Matches 266; Conservative 32; Mismatches 39; Indels 24; Gaps 7;

QY 1 MKETITASSALALALGTEMASAECSKLYGCGGKMNWGPCTCESGSTC--KVSNDYYS 58
 DB 1 MKETITASSALALALGTEMASAECSKAYGCGGKMNWGPCTCESGSTCVDYDPNPFYS 60
 QY 59 QCLPSC--SSGNKSS-----ESAHKTTTAHKTTTA-----AHKTTTAPAK 100
 DB 61 QCVPENLITSTNKSHTTTTESAKTTTTSKSKTTTTEASKTTTTEASKTTTTEAS 120
 QY 101 K--TTTVAKAST--PSNSSSSSGKYSAVSGASGNGVTRRYMDCCAKSCWPGKANVSSP 157
 DB 121 KTTTITTKASTTSSSSSSASTNYSAVSGASGNGETTRRYMDCCAKSCWPGKADVTSP 180
 QY 158 VSKCNKDGVTALSDNSAAGCNGNSYMCNDNOPMAVNDNLAYGFAAAISGGGSESRWCC 217
 DB 181 VSKCNKDGKT--LADNNTQNCVGGSSYTCDNDQPMWSDLAIGFAAASISGSEATWCC 239
 QY 218 SCEELFTSTSVAGKMKVQVNTGDLGSSGTGAHFDLQMPGGGVGIFNGCSSQWGAEND 277
 DB 240 ACEELFTSTSVAGKMKVQVNTGDLGSSGTGAHFDLQMPGGGVGIVNGCATQWGAEND 299
 QY 278 GWSRRYGGISSASDCSLPSALQAGCKMRFNFKNADNPSMTYKEVTCPEKITAKTGCSR 337
 DB 300 GWSRRYGGVSSASDCSLPSALQAGCKMRFNFKNADNPSMTYKEVTCPEKITAKTGCSR 359
 QY 338 K 338
 DB 360 K 360

RESULT 9
 ABB08062 ID ABB08062 standard; protein; 360 AA.
 XX
 AC ABB08062;
 XX
 DT 27-AUG-2002 (first entry)
 XX
 DE R. oryzae CP96001 RCEI11 protein.
 XX
 KM Cellulase: endoglucanase; surfactant; detergent; cellulose; paper;
 XX pulp treatment; RCEI11.
 OS
 XX Rhizopus oryzae.
 FH Key Location/Qualifiers
 FT Peptide 1..23
 FT /note= "signal peptide"
 FT Protein 24..360
 FT /note= "mature protein"
 XX
 XX MO200238754-A1.
 XX
 PD 16-MAY-2002.
 XX
 XX 12-NOV-2001; 2001WO-JP09858.
 XX
 XX 10-NOV-2000; 2000JP-0343921.
 XX
 XX (MEIJ) MEIJI SEIKA KAISHA LTD.
 PA

XX Koga J, Nakane A, Baba Y, Kono T;
 XX WPI; 2002-471555/50.
 DR

PT Cellulase preparations containing transconjugant-originated
 PT endoglucanase and non-ionic surfactants, useful in detergent
 PT compositions, in treating cellulose fibers and deinking waste paper and
 XX improving freeness of paper pulp

PS Claim 3; Page 25-27; 38pp; Japanese.

CC The invention relates to a cellulase preparation comprising a
 CC transconjugant-originated endoglucanase and a non-ionic surfactant. The
 CC endoglucanase is selected from RCEI, RCEI1, RCEI11, MCEI, MCEI1 or PCEI
 CC proteins. The preparations are useful in detergent compositions, in
 CC treating cellulose fibers and deinking waste paper and improving the
 CC freeness of paper pulp. The fibers treated by the preparations have
 CC reduced feathering and improved skin-feel and appearance with colour
 CC clarification, local change in colour and softening, and after deinking
 CC and paper pulp treatment, there is an improvement on freeness of the
 CC paper pulp. This treatment with the cellulase preparation can be operated
 CC at significantly lower cost. The present sequence represents the
 CC R. oryzae CP96001 RCEI11 protein.

SQ Sequence 360 AA;

Query Match 76.5%; Score 1404; DB 23; Length 360;

Best Local Similarity 73.7%; Pred. No. 4.9e-94;

Matches 266; Conservative 32; Mismatches 39; Indels 24; Gaps 7;

QY 1 MKETITASSALALALGTEMASAECSKLYGCGGKMNWGPCTCESGSTC--KVSNDYYS 58
 DB 1 MKETITASSALALALGTEMASAECSKAYGCGGKMNWGPCTCESGSTCVDYDPNPFYS 60
 QY 59 QCLPSC--SSGNKSS-----ESAHKTTTAHKTTTA-----AHKTTTAPAK 100
 DB 61 QCVPENLITSTNKSHTTTTESAKTTTTSKSKTTTTEASKTTTTEASKTTTTEAS 120
 QY 101 K--TTTVAKAST--PSNSSSSSGKYSAVSGASGNGVTRRYMDCCAKSCWPGKANVSSP 157
 DB 121 KTTTITTKASTTSSSSSSASTNYSAVSGASGNGETTRRYMDCCAKSCWPGKADVTSP 180
 QY 158 VSKCNKDGVTALSDNSAAGCNGNSYMCNDNOPMAVNDNLAYGFAAAISGGGSESRWCC 217
 DB 181 VSKCNKDGKT--LADNNTQNCVGGSSYTCDNDQPMWSDLAIGFAAASISGSEATWCC 239
 QY 218 SCEELFTSTSVAGKMKVQVNTGDLGSSGTGAHFDLQMPGGGVGIFNGCSSQWGAEND 277
 DB 240 ACEELFTSTSVAGKMKVQVNTGDLGSSGTGAHFDLQMPGGGVGIVNGCATQWGAEND 299
 QY 278 GWSRRYGGISSASDCSLPSALQAGCKMRFNFKNADNPSMTYKEVTCPEKITAKTGCSR 337
 DB 300 GWSRRYGGVSSASDCSLPSALQAGCKMRFNFKNADNPSMTYKEVTCPEKITAKTGCSR 359
 QY 338 K 338
 DB 360 K 360

RESULT 10

AAO15063 ID AAO15063 standard; protein; 245 AA.

XX AAO15063;

DT 22-AUG-2002 (first entry)

DE Endoglucanase-related recombinant protein 2.

XX Zygomycetes-originated endoglucanase; cellulose binding domain;
 XX fibre processing; waste paper de-inking; paper pulp.
 KM
 XX

OS Unidentified.
 XX WO200242474-A1.
 XX 30-MAY-2002.
 XX
 XX 21-NOV-2001; 2001WO-JP10188.
 XX
 XX 21-NOV-2000; 2000JP-0354296.
 XX
 XX (MEIJ) MEIJI SEIKA KAISHA LTD.
 XX
 XX Nakane A, Baba Y, Koga J, Kubota H;
 XX
 XX WPI; 2002-471729/50.
 XX
 XX Cellulose-binding domain-lacking Zygomycetes-originated endoglucanase,
 PT with effect of endoglucanase activity enhanced in processing fibers,
 PT deinking waste paper and improving freeness of paper pulp -
 XX
 XX Example 2; Page 33; 109pp; Japanese.
 XX
 XX The invention comprises the amino acid and coding sequences of
 CC zygomyces-originated endoglucanase enzymes lacking the cellulose
 CC binding domain. The zygomycetes-originated endoglucanase enzymes of the
 CC invention have enhanced endoglucanase activity. The zygomycetes-
 CC originated endoglucanase enzymes of the invention are useful for
 CC processing fibres, de-inking waste paper and improving the freeness of
 CC paper pulp - which is particularly applicable in detergent compositions.
 CC The present amino acid sequence represents an endoglucanase-related
 CC protein of the invention.
 XX
 XX Sequence 245 AA;
 SQ
 Query Match 68.8%; Score 1263.5; DB 23; Length 245;
 Best Local Similarity 71.6%; Pred. No. 5e-84;
 Matches 242; Conservative 0; Mismatches 3; Indels 93; Gaps 1;
 QY 1 MKFTITASSALLALALGTEMASAECSKLYGCGGKNNMGPCCSSGSTCKYNSNDYSGC 60
 DB 1 MKFTITASSALLALALGTEMASAECSKLYGCGGKNNMGPCCSSGSTCKYNSNDYSGC 24
 QY 61 LPSSGSGNKSSESAAHKTTTAAHKTTTAAHKTTTAAHKTTTAAKASTPENSSSSSG 120
 DB 25 -----10G 27
 QY 121 KTSAVSGASGNGVTRTYWDCCKASCSPGKANVSSPVKSCNKD3VTALSDSNAOSGCG 180
 DB 28 KTSAVSGASGNGVTRTYWDCCKASCSPGKANVSSPVKSCNKD3VTALSDSNAOSGCG 87
 QY 181 GNSVNCNPNQPAVNDNLAYGFALAAISGGGSRMCCSCFELTFSTSVAGKKMVOYTN 240
 DB 88 GNSVNCNPNQPAVNDNLAYGFALAAISGGGSRMCCSCFELTFSTSVAGKKMVOYTN 147
 QY 241 TGGDLGSSSTGAHFDLQMPGGGAGVIFNGCASSQWGAAPNDGWSRYGSISSASDSSLPALQ 300
 DB 148 TGGDLGSSSTGAHFDLQMPGGGAGVIFNGCASSQWGAAPNDGWSRYGSISSASDSSLPALQ 207
 QY 301 AGCKRPFNWFKNADNPSMTYKEVTCPEKITTAATGCSRK 338
 DB 208 AGCKRPFNWFKNADNPSMTYKEVTCPEKITTAATGCSRK 245
 RESULT 11
 AAB09824 standard; Protein; 338 AA.
 XX
 XX AAB09824;
 XX
 XX 25-SEP-2000 (first entry)
 XX
 XX Endoglucanase protein sequence 4.
 XX

KW Endoglucanase; cellulose breakdown; produce pulp; papermaking;
 KW animal foodstuff.
 XX
 XX Mucor circinelloides.
 XX
 XX WO200024879-A1.
 XX
 XX 04-MAY-2000.
 XX
 XX 25-OCT-1999; 99WO-JP05884.
 XX
 XX 23-OCT-1998; 98JP-0302387.
 XX
 XX (MEIJ) MEIJI SEIKA KAISHA LTD.
 XX
 XX Nakamura Y, Moriya T, Baba Y, Yanai K, Sumida N, Nishimura T;
 PI Murashima K, Nakane A, Yaguchi T, Koga J, Murakami T, Kono T;
 XX
 XX WPI; 2000-365117/31.
 XX
 XX N-PSDB; AAA62729.
 XX
 XX Endoglucanases of fungal origin with high activity under alkaline
 PT conditions for production of paper pulp and animal feedstuffs -
 XX
 XX Claim 44; Page 120-122; 180pp; Japanese.
 XX
 XX This sequence represents an endoglucanase protein. The invention relates
 CC to an endoglucanase of fungal origin which can completely break down
 CC purified cellulose at a concentration of less than 1mg protein/1litre,
 CC and produces more than 50% breakdown of cellulose at pH 8.5. The
 CC invention includes endoglucanase protein sequences (see
 CC AAB09825-B09830), endoglucanase nucleotide sequences (see
 CC AAA62726-A62732) and primers (AAA62733-A62802) which are used in the
 CC identification of the endoglucanase sequences, and in the construction of
 CC vectors containing the polynucleotides. The endoglucanase enzymes are
 CC used for the production of pulp for papermaking and for the production of
 CC animal foodstuffs.
 XX
 XX Sequence 338 AA;
 SQ
 Query Match 67.9%; Score 1247; DB 21; Length 338;
 Best Local Similarity 65.4%; Pred. No. 1.1e-82;
 Matches 227; Conservative 40; Mismatches 62; Indels 18; Gaps 6;
 QY 1 MKFTITASSALLALALGTEMASAECSKLYGCGGKNNMGPCCSSGSTC-KVNSNDYYS 58
 DB 1 MKFTITASSALLALALGTEMASAECSKLYGCGGKNNMGPCCSSGSTCVAQEGNKRTYS 59
 QY 59 QCLPSSGSGNKSSESAAHKTTTAAHKTTTAAHKTTTAAHKTTTAAKASTP 111
 DB 60 QCLPSSGSGNKSSESAAHKTTTAAHKTTTAAHKTTTAAHKTTTAAKASTP 118
 QY 112 SNSSSSSGKTSYAVSGASGNGVTRTYWDCCKASCSPGKANVSSPVKSCNKD3VTALSD 171
 DB 119 ---STSSAGYKVISGGSGSSTTRTYWDCCKASCSPGKANVSSPVKSCNKD3VTALSD 174
 QY 172 SNAOSGCGNKSYNMNDNQPAAVNDNLAYGFALAAISGGGSRMCCSCFELTFSTSVAG 231
 DB 175 SNAOSGCGNKSYNMNDNQPAAVNDNLAYGFALAAISGGGSRMCCSCFELTFSTSVAG 234
 QY 232 KKMVVQVNTGDLGSSSTGAHFDLQMPGGGAGVIFNGCASSQWGAAPNDGWSRYGSISSASD 291
 DB 235 KKMVVQVNTGDLGSSSTGAHFDLQMPGGGAGVIFNGCASSQWGAAPNDGWSRYGSISSASD 291
 QY 292 CSSLPALQAGCKRPFNWFKNADNPSMTYKEVTCPEKITTAATGCSRK 338
 DB 292 CSSLPALQAGCKRPFNWFKNADNPSMTYKEVTCPEKITTAATGCSRK 338
 RESULT 12
 AAO15055 standard; Protein; 338 AA.
 XX
 XX AAO15055
 XX

AC AA015055;
 XX
 DT 22-AUG-2002 (first entry)
 XX
 DE Rhizopus arrhizus endoglucanase-related protein 4.
 XX
 KM Zymomyces-originated endoglucanase; cellulose binding domain;
 XX
 KM fibre processing; waste paper de-inking; paper pulp.
 XX
 OS Mucor circinelloides.
 XX
 PN WO200242474-A1.
 XX
 PD 30-MAY-2002.
 XX
 PF 21-NOV-2001; 2001MO-JP10188.
 XX
 PR 21-NOV-2000; 2000JP-0354296.
 XX
 PA (MEIJ) MEIJI SEIKA KAISHA LTD.
 XX
 PI Nakane A, Baba Y, Koga J, Kubota H;
 XX
 DR WPI; 2002-471729/50.
 XX
 DR N-PSDB; AAL43247.
 XX
 PT Cellulose-binding domain-lacking Zymomyces-originated endoglucanase,
 PT with effect of endoglucanase activity enhanced in processing fibers,
 PT deinking waste paper and improving freeness of paper pulp -
 XX
 PS Claim 5; Page 68-70; 109pp; Japanese.
 XX
 CC The invention comprises the amino acid and coding sequences of
 CC zymomyces-originated endoglucanase enzymes lacking the cellulose
 CC binding domain. The zymomyces-originated endoglucanase enzymes of the
 CC invention have enhanced endoglucanase activity. The zymomyces-
 CC originated endoglucanase enzymes of the invention are useful for
 CC processing fibers, de-inking waste paper and improving the freeness of
 CC paper pulp - which is particularly applicable in detergent compositions.
 CC The present amino acid sequence represents an endoglucanase-related
 CC protein of the invention.
 XX
 CC
 SQ Sequence 338 AA;
 Query Match 67.9%; Score 1247; DB 23; Length 338;
 Best Local Similarity 65.4%; Pred. No. 1.1e-82;
 Matches 227; Conservative 40; Mismatches 62; Indels 18; Gaps 6;
 QY 1 MKFTTASSALLALALGTEMASABCSKLYGCGGKRWNGPTCCESGTC--KVSNDYYS 58
 DB 1 MKFTVAITSIIVALLALSSS-AEASCSGVYGCQGGIGWSGPTCCESGTCVADEGNKYYS 59
 QY 59 QCLPSGSGSNKSSSAHKKTTHAAHKT-----TTAAHKKTTPAKKTTTAAKASTP 111
 DB 60 QCLPGSHNNAGNASSSTKSTSTTTAKATATVTTKTVTKTTTKTTTAAAST- 118
 QY 112 SNSSSSSGKYSAAVSGASGVVTRYWDCCKASCMPGKANVSPVSKCKDGVTALSD 171
 DB 119 ---STSSAGYKVIISGKSGSGSTRYWDCCKASCMPGKASVTGPDVTCASNGISLL-D 174
 QY 172 SNAOSGCGNSYMCNDNQPAVNDNLAYGPAALAISSGGGSRKCCSFELTFTSTVAG 231
 DB 175 ANAOSGCGNGGFMGNNNQPAVNDNLAYGPAALAISSAGSNEAGWCCGCEYELTFTSGASG 234
 QY 232 KKMVVQVNTGDDGSSGTAHPDLQMPGGGVGIFNGCSOMGAPDGGSGRSGISSASD 291
 DB 235 KKMVVQVNTGDDGSSN---HFDLQMPGGGVGIFNGCAOMGAPDGGAGAYGVSSVSD 291
 QY 292 CSSLPALQAGCKRFFNFKXADNPSTYKEVTCPEKITAKTGCGRK 338
 DB 292 CASLPALQAGCKRFFNFKXADNPSTYKEVTCPEKITAKTGCGRK 338

RESULT 13
 ABB08063
 ID ABB08063 strand1; protein; 338 AA.
 XX
 AC ABB08063;
 XX
 DT 27-AUG-2002 (first entry)
 XX
 DE M. circinelloides CP99001 MCEI protein.
 XX
 KM Cellulase; endoglucanase; surfactant; detergent; cellulose; paper;
 KM pulp treatment; MCEI.
 XX
 OS Mucor circinelloides.
 XX
 PN WO200238754-A1.
 XX
 PD 16-MAY-2002.
 XX
 PF 12-NOV-2001; 2001MO-JP09858.
 XX
 PR 10-NOV-2000; 2000JP-0343921.
 XX
 PA (MEIJ) MEIJI SEIKA KAISHA LTD.
 XX
 PI Koga J, Nakane A, Baba Y, Kono T;
 XX
 DR WPI; 2002-471555/50.
 XX
 PT Cellulase preparations containing transconjugant-originated
 PT endoglucanase and non-ionic surfactants, useful in detergent
 PT compositions, in treating cellulose fibers and deinking waste paper and
 PT improving freeness of paper pulp -
 XX
 PS Claim 3; Page 27-29; 38pp; Japanese.
 XX
 CC The invention relates to a cellulase preparation comprising a
 CC transconjugant-originated endoglucanase and a non-ionic surfactant. The
 CC endoglucanase is selected from RCEI, RCEII, RCEIII, MCEI or PCEI
 CC proteins. The preparations are useful in detergent compositions, in
 CC treating cellulose fibers and deinking waste paper and improving the
 CC reduced feathering and improved skin-feel and appearance with colour
 CC clarification, local change in colour and softening, and after deinking
 CC and paper pulp treatment, there is an improvement on freeness of the
 CC paper pulp. This treatment with the cellulase preparation can be operated
 CC at significantly lower cost. The present sequence represents the
 CC M. circinelloides CP99001 MCEI protein.
 XX
 CC
 SQ Sequence 338 AA;
 Query Match 67.9%; Score 1247; DB 23; Length 338;
 Best Local Similarity 65.4%; Pred. No. 1.1e-82;
 Matches 227; Conservative 40; Mismatches 62; Indels 18; Gaps 6;
 QY 1 MKFTTASSALLALALGTEMASABCSKLYGCGGKRWNGPTCCESGTC--KVSNDYYS 58
 DB 1 MKFTVAITSIIVALLALSSS-AEASCSGVYGCQGGIGWSGPTCCESGTCVADEGNKYYS 59
 QY 59 QCLPSGSGSNKSSSAHKKTTHAAHKT-----TTAAHKKTTPAKKTTTAAKASTP 111
 DB 60 QCLPGSHNNAGNASSSTKSTSTTTAKATATVTTKTVTKTTTKTTTAAAST- 118
 QY 112 SNSSSSSGKYSAAVSGASGVVTRYWDCCKASCMPGKANVSPVSKCKDGVTALSD 171
 DB 119 ---STSSAGYKVIISGKSGSGSTRYWDCCKASCMPGKASVTGPDVTCASNGISLL-D 174

Qy 172 SNAAGCGNGSGNSYMCNDNPMAVNDNLAYGFAAAAISGGESBRCCSCCELTFTSTSVAG 231
 Db 175 AAGAGCGNGGNGFMCNNQPMVAVNDELAAGFAAASAGSNEAGCCGCELTFTSTGAASG 234
 Qy 232 KMMVQVNTTGGDLSSSTGAHFDLWPGGCGVGFNGCCSSQMGAPNDGMSRRGGISASD 291
 Db 235 KMMVQVNTTGGDLSSN--HFDLWPGGCGVGFNGCAAQMGAPNDGMSRRGGISASD 291
 Qy 292 CSSLPSALQAGCKMRFNFKNADNPSMTYKEVTCPEKRTAKTGCSRK 338
 Db 292 CASLPSALQAGCKMRFNFKNSDNPTMTKEVTCPEALTTTRSGCERK 338

RESULT 14

AAB09825
 ID AAB09825 standard; Protein; 387 AA.

AC AAB09825;

DT 25-SEP-2000 (first entry)

DE Endoglucanase protein sequence 5.

KM Endoglucanase; cellulose breakdown; produce pulp; papermaking;
 animal foodstuff.

OS Phycomyces nitens.

PN WO200024879-A1.

PD 04-MAY-2000.

PF 25-OCT-1999; 99WO-JP05884.

PR 23-OCT-1998; 98JP-0302387.

PA (MEIJU) MEIJU SEIKA KAISHA LTD.

PI Nakamura Y, Moriya T, Baba Y, Yanai K, Sumida N, Nishimura T;
 PI Murehima K, Nakane A, Yaguchi T, Koga J, Murakami T, Kono T;

DR WPI; 2000-365117/31.

DR N-PSDB; AAA62730.

PT Endoglucanases of fungal origin with high activity under alkaline
 PT conditions for production of paper pulp and animal feedstuffs -

PS Claim 44; Page 125-127; 180pp; Japanese.

CC This sequence represents an endoglucanase protein. The invention relates
 CC to an endoglucanase of fungal origin which can completely break down
 CC purified cellulose at a concentration of less than 1mg protein/litre,
 CC and produces more than 50% breakdown of cellulose at pH 8.5. The
 CC invention includes endoglucanase protein sequences (see
 CC AAB09825-B09830), endoglucanase nucleotide sequences (see
 CC AAA62730-A62732) and primers (AAA62733-A62802) which are used in the
 CC identification of the endoglucanase sequences, and in the construction of
 CC vectors containing the polynucleotides. The endoglucanase enzymes are
 CC used for the production of pulp for papermaking and for the production of
 CC animal foodstuffs.

CC Sequence 387 AA;

Query Match 66.6%; Score 1222.5; DB 21; Length 387;

Best Local Similarity 57.1%; Pred. No. 7.9e-81; Indels 67; Gaps 6;

Matches 226; Conservative 40; Mismatches 63; Indels 67; Gaps 6;

Qy 1 MKFTTASALALALGTEMAAECGSKLYGCGGKNNWPTCCSGSTCKXSNP----- 55

Db 1 MKFTVAITSIYALALSSS-ABAAGCSYRGCGGIGTGPTCCAGSTCKAKXKNKYS 59

Qy 56 -----YSGCLPSGSGGNK 69

Db 60 QCIPEKSSSSSSSCSSYSQCGIGMGPTCCSGSTCVAGBNKYYSOCLPGSHSNA 119
 Qy 70 SSESARKTTTAAHKT-----TTAAHKTTPAPAKTTTAAKSTPNSSSSSSGKY 122
 Db 120 GNASTKKTSTSTSTTTAKATATVTTKTVTKTTTKTTTAAST-----STSSAGY 175
 Qy 123 SAVSGASGNGVTTYRYMDCCRASGMPKANVSPVKSCKNDGYTALSDSNAQSCNGN 182
 Db 176 KVISGKSGSGSTRTYMDCCRASGMPKASVYGVPTCASNGISLL-DANAQSCNGN 234
 Qy 183 SYMCNDNPMAVNDNLAYGFAAAAISGGESBRCCSCCELTFTSTSVAGKMMVQVNTTG 242
 Db 235 GEMCNNQPMVAVNDELAAGFAAASAGSNEAGCCGCELTFTSTGAAGCKMMVQVNTTG 294
 Qy 243 GDLSSSTGAHFDLWPGGCGVGFNGCCSSQMGAPNDGMSRRGGISASDSSLPSALQAG 302
 Db 295 GDLSSN--HFDLWPGGCGVGFNGCAAQMGAPNDGMSRRGGISASDSSLPSALQAG 351
 Qy 303 CKMRFNFKNADNPSMTYKEVTCPEKRTAKTGCSRK 338
 Db 352 CKMRFNFKNSDNPTMTKEVTCPEALTTTRSGCERK 387

RESULT 15

AA015056
 ID AA015056 standard; Protein; 387 AA.

AC AA015056;

DT 22-AUG-2002 (first entry)

DE Rhizopus arthizus endoglucanase-related protein 5.

KM Zygomycetes-originated endoglucanase; cellulose binding domain;
 KM fibre processing; waste paper de-linking; paper pulp.

OS Mucor circinelloides.

PN WO200242474-A1.

PD 30-MAY-2002.

PF 21-NOV-2001; 2001WO-JP10188.

PR 21-NOV-2000; 2000JP-0354296.

PA (MEIJU) MEIJU SEIKA KAISHA LTD.

PI Nakane A, Baba Y, Koga J, Kubota H;

DR WPI; 2002-471729/50.

DR N-PSDB; AAL43248.

PT Cellulose-binding domain-lacking Zygomycetes-originated endoglucanase,
 PT with effect of endoglucanase activity enhanced in processing fibers,
 PT deinking waste paper and improving freeness of paper pulp -

PS Claim 5; Page 73-75; 109pp; Japanese.

CC The invention comprises the amino acid and coding sequences of
 CC zygomycetes-originated endoglucanase enzymes lacking the cellulose
 CC binding domain. The zygomycetes-originated endoglucanase enzymes of the
 CC invention have enhanced endoglucanase activity. The zygomycetes-
 CC originated endoglucanase enzymes of the invention are useful for
 CC processing fibres, de-linking waste paper and improving the freeness of
 CC paper pulp - which is particularly applicable in detergent compositions.
 CC The present amino acid sequence represents an endoglucanase-related
 CC protein of the invention.

CC Sequence 387 AA;

Query Match 66.6%; Score 1222.5; DB 23; Length 387;

Best Local Similarity 57.1%; Pred. No. 7.9e-81;

	Matches	Conservative	40;	Mismatches	63;	Indels	67;	Gaps	6
QY	1	MKFTTASSALIALALGTEMASABCSKLYGCGCGKNNNGPTCCBSGTCYKISND-----	55						
Db	1	MKFTVAITISIAVALALSSS-AEAAGCSSYVGCGGIGMTCCDAGSTCCAKQKNNKYYS	59						
QY	56	-----YSSQLPSGSGSNK	69						
Db	60	QCIPPKSGSSSSSCSSSVISQCGGIGMSGPTCCBSGTCVAQEGNKTYISQCLPGHSNNA	119						
QY	70	SSESAAHKTTTAAHKKT-----TTAAHKTTTAPAKTTTAAKASTPNSSSSSSGKX	122						
Db	120	GNASSTPKSTKSTSTTTAKATATVLTFTKTYKTLTKTTKTSTSTTAAST-----STSGSACY	175						
QY	123	SAVSGGASGANGVTRRWDCCKKASCMPKGANYSPIKSNCKQGVTLSDPSNMGSGNGGN	182						
Db	176	KVISGKSSGSGSTRRWDCCKKASCMPKGAASVGPVDTCASNGISL-L-DNAGSGGNGGN	234						
QY	183	SYMCDNOMPAVVDNLAYGFPAALAISSGGSERWCCSCFELTFTSTVAGKRWVQVYNTNG	242						
Db	235	GEMCINNQWAVYVDLAYGFPAALAISSGNSDNAGCCGCYELTFTFGAASGKRWVQVYNTNG	294						
QY	243	GDIGSGTGAHPDLOMPFGGVGIFNGCSSQMGAPNDGMSRYGGISASDCCSLPSPALQAG	302						
Db	295	GLIGSN---HFDLOMPFGGVGIFNGCAAOAGANDGARYGGVSSVSDCASLPSPALQAG	351						
QY	303	CKMRFNWFRADNPSTMYTEVCTCPKELTAKTSGSRK	338						
Db	352	CKMRFNWFRADNPSTMYTEVCTCPKELTAKTSGSRK	387						

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Job time : 39.0454 secs